MINUTES OF [redacted] MEETING
17 December 1965

STA

AT [redacted]

AT [redacted] - The program being discussed started in July 1965. There are two machines associated with the program. One is called the contact ~~and~~ duplicating and ~~machine~~ research printer which we call Printer I. The second is the step and repeat (High Resolution) printer which we call Printer II.

Printer II has a longer delivery program. The original requirement was to handle edge coded film. ~~emblem.~~ 70mm would have a 5" printing gate area. The net change is about $111K which includes the stop work order which took place in the middle of October. Our start up cost will be a little over [redacted] STA

What we expect the program ~~will~~ would really cost ~~is~~ was [redacted] STA

AT [redacted]

Program Status: Printer I is probably more than 80% complete. In Printer II we have stopped all efforts as of the middle of October.

In terms of the original concept of the machine, it was being designed in terms of coded machine input. We went to frame viewing and frame sensing so that _____ film could be used. To the best of our knowledge, there is no machine commercially available.

AT [redacted] - There was actually going to be an ~~a~~excess of funds in the contract.

AT [redacted] - If I mislead you that there was a [redacted] coming back from a STA program, it wasn't my intent.

AT [redacted] - When was the first time you realized this overrun was coming about?

TAT [redacted]- I guess it was in the latter part of February of 1965. During this time the program was re-evaluated. From about February until about May of 1965, there were several discussions about how these changes should come about. These were gradual transitions. These were picked up at the time we submitted the February report. Through each monthly report we always listed all changes.

TAT [redacted]- The financial impact of these changes were not always so punctual.

TAT [redacted]- That is because we hand't decided on a cut off date where these changes would start. The first cost document submitted was in August. The feasibility report went in in January.

TAT [redacted]- What do you mean by net statements? The credits that we get eliminating these various requirements. Does this mean you included the overhead allowances?

TAT [redacted]- The overhead rates which we used in quoting is [redacted] ST

TAT [redacted]- What percentage of Printer II is completed?

[redacted]- 60%

[redacted]- I thought we were supposed to be notified when you had spent 75% of the funds. Have we been?

TAT [redacted]- No, we are guilty there. In the future we won't do what the contract states.

Proj #997093
Rec'd, 13 Aug 65
RFD
3 Sept 65 RFD

August 9, 1965

Dear Russ

Enclosed are three advance copies of the Printer No. 1 Test Plan.

Would you please forward one copy each to [redacted] STAT

Thank you.

Truly yours,

[redacted] STAT

MEMO

from [redacted]

To Ella Date 13 Aug 65 Time

Please mail the attached to:

[redacted]

Strategic Systems Division,
US Army Engineer GIMRADA
Fort Belvoir, Virginia

Use the [redacted] return address
the "Test Plan" is unclassified--
return receipt is not needed,

[redacted]

ved For Release 2005/06/23 : CIA-RDP78B04770A001600

☐ Reply ☐ Initial and return ☐ See me ☑ Completed

MEMO

from

To

Date 13 Aug 65 Time

Herb asked me to send this "Test Plan" to you. Another copy is being sent to Ray.

Russ

☐ Reply ☐ Initial and return ☐ See me ☑ Completed

MEMO

from [redacted]

To [redacted] Date 13 Aug 65

Herb asked me to send this "Test Plan" to you. Another copy is being sent to Si.

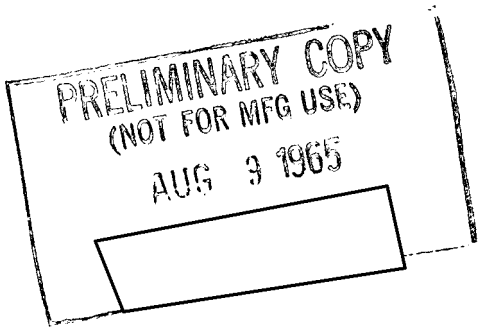
Russ.

☐ Reply ☐ Initial and return ☐ See me ☑ Completed

TEST PLAN

for

CONTACT DUPLICATING AND RESEAU PRINTER



STAT

Prepared for

THE UNITED STATES GOVERNMENT

by

STAT

[redacted]

June, 1965

TEST PLAN
for
CONTACT DUPLICATING AND RESEAU PRINTER

Introduction

In compliance with paragraph 4.1 of the Purchase Description for the Contact Duplicating and Reseau Printer, dated 14 February, 1965, [redacted] hereby submits a Test Plan for approval. STAT

The Test Plan describes test methods and procedures to be used to determine conformance with the performance requirements of the purchase description.

The Test Plan procedures will be demonstrated by [redacted] representatives in the presence of government inspectors at the point of manufacture prior to delivery and acceptance at FOB point, and a detailed report of the test results will be delivered with the Printer in accordance with paragraph 4.2 of the Purchase Description. STAT

In order to demonstrate compliance with the numerous contract requirements in a reasonable span of time, the Test Plan procedure will be essentially a test demonstration to spot-check or sample the capability of the Printer in all of its specified requirements. Realizing that a single satisfactory test result does not indicate conformance to a particular specification, it is anticipated that a statistically representative quantity of test data will be accumulated, compiled, and organized in notebook form prior to formal demonstration such that one or several successful tests in the presence of the monitors will be acceptable as proof of compliance to a particular specification.

TEST PLAN

CONTACT DUPLICATING & RESEAU PRINTER

This test will effectively demonstrate compliance with the following contractual requirements:

1.0 The Printer shall demonstrate capability to accommodate 70 mm. width film.

1.1 The Printer shall demonstrate capability to accommodate formats of 70 mm. x 5" with appropriate masking.

1.2 The Printer shall demonstrate capability to operate in an Automatic Mode with both negative and positive images.

1.3 The Printer shall demonstrate the capability to operate with emulsion-to-emulsion contact.

1.4 The Printer shall demonstrate capability to automatically transport duplicating film from left-to-right in 1/4" (or less) increments from 5" to 30".

1.5 The Printer shall demonstrate the capability for safe-light loading and daylight operation.

1.6 The Printer shall demonstrate the capability for automatic metering and positioning of negative and positive frames in the Automatic Mode.

1.7 The Printer shall demonstrate the capability for manual cutting and removal of partially-exposed rolls of duplicating film.

1.8 The Printer shall demonstrate the capability to operate from a 120/208 volt, 60 cycle, 3 phase, 4-wire power source with customer facilities provided for power compressed air, vacuum, and exhaust ductwork.

1.9 The Printer shall demonstrate the capability to accommodate input and output film thicknesses of approximately 2.5 to 7.0 mils.

TEST RUN #1

Load Printer under appropriate safe-light conditions with a partial roll of 50 ft. minimum length of 70 mm., 2-1/4" x 2-1/4" negatives. The input film strip will be made up of equally sized frames using a film base of approximately 2.5 mils and a typical aerial survey negative having a broad range of densities. The clear platen will be utilized.

With the negative emulsion facing up, and a 70 mm. x 5" long mask inserted in the Printer, make a series of 5 prints, one each, in the Automatic Mode, with the Exposure Factor Control set for Normal. Duplicating film will be type #8430 with increment advance control set for 5". Room-lights shall be on during the printing sequence only. Remove the partially-exposed roll of duplicating film and process under controlled conditions. The same test procedure is to be repeated using positive film input. In addition, process a 30" length of duplicating film which has been allowed to remain on the platen for one minute without an exposure cycle, but with room-lights on and the Printer closed. After processing, measure density above base fog and compare to an unexposed sample of film processed simultaneously.

The following test will effectively demonstrate compliance with the following contractual requirements:

2.0 The Printer shall demonstrate capability to accommodate films up to 9-1/2" wide and roll lengths up to 500 ft.

2.1 The Printer shall demonstrate capability to accommodate formats up to 9" x 30".

2.2 The Printer shall demonstrate capability to operate in the Reseau (or Manual) Mode with the Reseau Grid in place.

2.3 The Printer shall demonstrate capability to operate with the negative film emulsion facing down, toward the Reseau Grid platen.

2.4 The Printer shall demonstrate capability to accommodate input and output film thicknesses of approximately 2.5 to 7.0 mils.

2.5 The Printer shall demonstrate capability for transport of negative film at both high and low speeds with the negative transport drawer open.

2.6 The Printer shall demonstrate capability for exposing a Reseau Grid onto the duplicating film with an output line width of 12 to 15 microns when projected through a negative having a broad range of densities, with a film thickness of approximately 7 mils. Line widths are to be measured by microscope of comparator at ten discreet points.

TEST RUN #2

Load Printer under appropriate safe-light conditions with a 500 ft. roll of 9-1/2" wide film containing 9" x 30" format frames on a film base of approximately 7 mils. The negative film will be composed of equally sized frames of a typical aerial survey negative having a broad range of densities. The Reseau platen will be utilized for this test. The 500 ft. roll will have a minimum of 5 consecutive frames, but need not be completely filled with frames. The image-bearing portion of the roll will be previously punched and will be loaded into the Printer with emulsion down.

With a 9" x 30" mask in place in the Printer, make a series of 5 Reseau prints, one each, on Type #8430 duplicating film, with the Exposure Factor Control set for Normal. Set incremental film advance for 30". Locate each of 5 negatives to be printed using the locator pins associated with the Reseau Grid and with the negative-film drawer open. Safe-lights shall be used during this test.

Remove the partially-exposed roll of duplicating film and process under controlled conditions.

The following test will effectively demonstrate compliance with the following contractual requirements:

3.0 The Printer shall demonstrate capability for achieving sufficient contact pressure and for producing resolution of at least 300 lpm. with emulsion-to-emulsion contact. A statistical distribution will result from the three resolution readings taken in each of thirty positions over the format. Readings are to be taken by representatives

of the Government, [redacted] The lowest of the vertical and horizontal readings shall be utilized, and an average of the observers' readings recorded. Fifty percent or more of all readings shall be over 300 lpm. for acceptability. STAT

3.1 The Printer shall demonstrate capability to select a given number of duplicate prints in any quantity up to ten.

TEST RUN #3

Load the Printer with Type SO-267 duplicating film under appropriate safe-light conditions. Insert over the clear platen with emulsion side up, a 6" x 9" format of six resolution targets of at least 400 lpm. With the Exposure Factor Control set for an exposure value which optimizes resolution characteristics, and the duplicate film advance set for a 30" advance, make a series of three exposures in each of five positions covering the length of the platen in 6" increments and process under controlled conditions.

The following test will effectively demonstrate compliance with the following contractual requirements:

4.1 The Printer shall demonstrate capability for Automatic Exposure Control. A subjective comparison of prints from the two methods of exposure will demonstrate Printer capability for automatic exposure control of incremental areas.

4.2 The Printer shall demonstrate capability for duplicating negatives of 9" x 30" format at the rate of at least six per minute.

TEST RUN #4

Load the Printer under appropriate safe-light conditions with Type #8430 film in the 9-1/2" width. Insert over the clear platen a format of three 9" x 9" typical aerial negatives which have been approved by the technical monitors as being representative. With the Exposure Factor Control set for Normal, and the Duplicating Film Advance set for 30", make a series of 10 prints and

time the total operation by stop watch. Repeat the procedure without automatic exposure control, using a manually timed exposure interval for one exposure.

The following test will effectively demonstrate compliance with the following contractual specifications:

5.0 The Printer shall demonstrate capability to expose a Reseau Grid such that the centrally reproduced line shall be no more than ±5 microns from the referenced frame fiducial or reference grid line on the special pre-punched negative. Comparator or microscope measurement shall be used to measure accuracy of Reseau printing. Measurement shall be made in the same area on the reproduced grid as was viewed and punched on the special grid negative.

5.1 The Pre-View & Punch Station shall demonstrate capability for viewing, aligning, and punching one whole in the border of the negative film to a fixed distance from a fiducial or reference grid line such that subsequent print-out will show the central Reseau line to be within ±5 microns from the reproduced fiducial or reference grid line.

TEST RUN #5

With the Printer loaded with Type #8430 duplicating film in the 9-1/2" width, insert on the Reseau Grid platen a special grid negative containing one high density grid line of approximately 12 microns on a clear background. Locate the negative with emulsion down with the locator pins in holes previously punched at the Pre-View & Punch Station. Make an exposure with the Exposure Factor Control set for Normal.

The following test will effectively demonstrate compliance with the following contractual specifications:

6.0 The Printer shall be designed to prevent damage to the original film input to the maximum extent possible.

TEST RUN #6

Utilizing approximately ten feet of clean, unexposed Type #8430 film, mark off three areas at random of approximately 9" x 9". Visually examine the selected areas for scratches, and delineate and record such imperfections.

Load the film sample onto the negative transport of the Printer with emulsion side up, and make a simulated series of 30" long exposures in the Manual Mode (since there are no frame-edges) with corresponding advance of duplicating film. Upon reaching the end of the film sample, remove the ten foot length and visually re-examine the delineated areas to determine the extent of any damage to the original film incurred during Printer operation.

For the purpose of this test, an objectionable scratch shall be defined as a single scratch or rupture of the base or emulsion which extends for more than two feet of film or a scratch which appears periodically at the same point of every simulated frame for more than two feet of film.

For the purpose of determining film tension and possible film distortion during Printer operation, measure the maximum voltage applied to the take-up spool of the negative transport. Using pre-determined curves of clutch voltage vs. torque, determine the maximum torque applied to the film during transport, and calculate force per unit width of film. Tension values are to be below that specified by the film manufacturer.